

INTERNATIONAL STANDARD

ISO
9222-1

First edition
1989-07-01

Corrected and reprinted
1989-09-15

Technical drawings — Seals for dynamic application —

Part 1 : General simplified representation

*Dessins techniques — Joints d'étanchéité pour application dynamique —
Partie 1 : Représentation simplifiée générale*



Reference number
ISO 9222-1 : 1989 (E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 9222-1 was prepared by Technical Committee ISO/TC 10, *Technical drawings*.

ISO 9222 consists of the following parts, under the general title *Technical drawings — Seals for dynamic application* :

- Part 1: *General simplified representation*
- Part 2: *Detailed simplified representation*

Introduction

ISO 9222 provides rules for the simplified representation of seals.

The principle of drawing practice is to depict the object to scale using lines. In simplified representations, only essential features are shown, preferably in outline (in order to save time and effort).

The degree of simplification depends on the kind of object represented, the scale of the drawing and the purpose of the documentation. This means that either a general simplified representation or a detailed one may be used. A detailed representation shows more details of a seal, for example the configuration of lips (see ISO 9222-2).

In order to avoid misunderstandings, only one kind of simplification, either the general or the detailed simplified representation, should be used on a drawing.

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Technical drawings — Seals for dynamic application —

Part 1 : General simplified representation

1 Scope

This part of ISO 9222 specifies the general simplified representation for seals.

This representation should be used when it is not necessary to show the exact shape and details of the seals, for example in assembly drawings.

2 Normative reference

The following standard contains provisions which, through reference in this text, constitute provisions of this part of ISO 9222. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this part of ISO 9222 are encouraged to investigate the possibility of applying the most recent edition of the standard indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 128 : 1982, *Technical drawings — General principles of presentation*.

3 Method of representation

3.1 Lines

All features of the simplified representation shall be drawn with the same line thickness used for all other visible outlines and edges on the drawing (line type A, ISO 128).

3.2 Scale

The contour of the simplified representation shall be drawn to the same scale as used for the drawing.

3.3 General simplified representation

For general purposes (without specified lip configuration where it is not necessary to show the exact contour), the seal shall be represented by a square and a freestanding diagonal cross centred in the square (see figure 1). The cross shall not touch the outlines.

This representation shall be used in the space on one or both sides of the axis (see for example figure 4, for the case of a horizontal axis).

The representation shown in figure 1 shall be used only when the sealing direction is unimportant. If it is necessary to show the sealing direction, an arrowhead may be added to the diagonal cross (see for example figure 2).

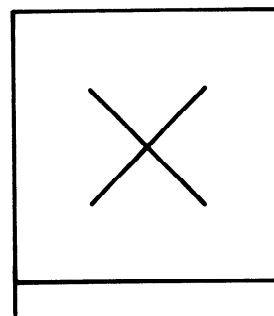


Figure 1

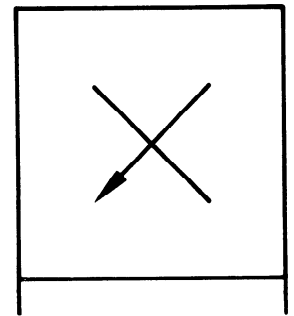


Figure 2

If it is necessary to show the exact contour of a sealing composition, it should be represented by the true outline of its cross-section, with the diagonal cross in a central position (see figure 3). The cross shall not touch the outlines.

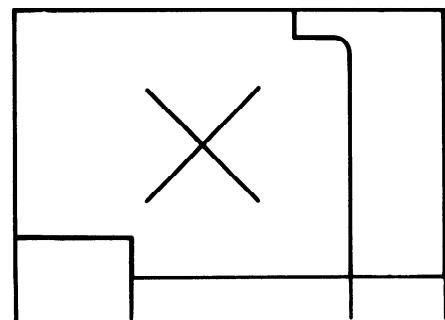


Figure 3

This representation shall be used in the space on one or both sides of the axis (see for example figure 4, for the case of a horizontal axis).

In cases where the seal permits more than one direction of assembly, the desired direction of assembly shall be given, for example by text or specification.

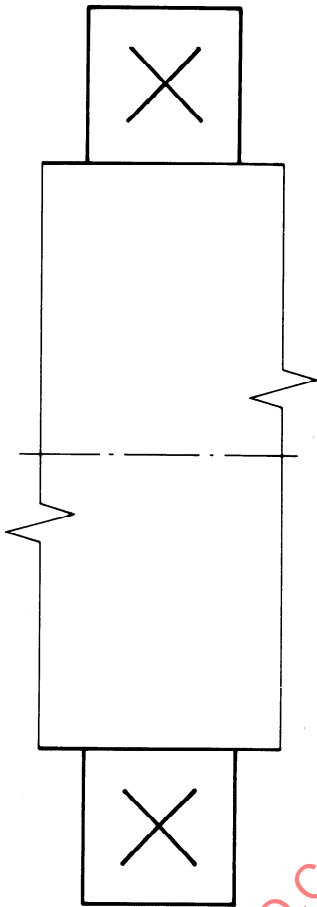


Figure 4

4 Hatching

In simplified representations, hatching should be avoided. If, in special cases, greater clarity is necessary (for example in more detailed representations or illustrations for catalogues in accordance with ISO 9222-2), all inserts and similar elements of the seals should be hatched in the same direction and with continuous thin lines (type B, ISO 128; see figure 5) or blackened (see figure 6).

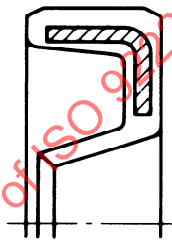


Figure 5

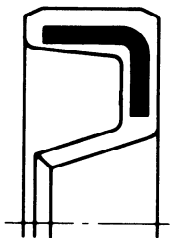


Figure 6